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The Files

15 December 1955

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Trip Report, AR-2 Field Tests

1. Purpose of the trip: The purpose of this trip was to field test the AR-2 printer under actual operating conditions at medium and fairly long ranges.

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2. Operation at [REDACTED] The [REDACTED] signal was transmitted from the R&D Laboratory using the Johnson Viking Model 240-1000 Transmitter modulated with a [REDACTED] unit. Nine frequencies were cleared for the test period and prior observation had revealed all of them to be reasonably clear. However, difficulty was encountered in selecting a clear frequency at [REDACTED] Low signal strength and deep fading made copying on any but the most sensitive condition of the AR-2 highly unreliable.

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3. Operation at [REDACTED] The same transmitting facilities were used for the [REDACTED] test as had previously been used at [REDACTED]. The frequencies chosen were, generally, clear. When deep fading was encountered, at signal-to-noise ratios near unity, the quality of reception indicated the need for increased sensitivity. By removing an RC filter from the amplifier input it was possible to increase the sensitivity by a factor of two. The [REDACTED] tests had shown that the additional selectivity afforded by this filter was not required. Under conditions of deep fading, satisfactory copy was received at [REDACTED] for all transmissions in which the signal level was high enough to be detected in the earphones. Acceptable copy also was obtained through high level ignition noise.

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4. Summary: In general, the amplifier proved to be acceptable. A misalignment of the tape puller and paper guide was revealed during the tests and is being corrected. Further field testing of the AR-2 in its present form is unnecessary.

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Lab/AJS/bao: (15 Dec 55)

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